Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) ~~The systems of claim 2, wherein the first transducer comprises an~~

A system for measuring fluid in a container, the system comprising:

one or more transducers operable to:

introduce a vibration to a container wall,

detect an introduced vibration that has propagated at least partially around a container wall in more than one vertical propagation direction, and

generate a signal representative of a detected vibration; and

a computer operable to determine a state of a fluid in a container based on a signal representing an introduced vibration that has propagated at least partially around a container wall in more than one vertical propagation direction;

wherein the one or more transducers comprises at least one air transducer operable to introduce a vibration to a container wall.

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

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34. (Canceled)

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37. (Canceled)

38. (Canceled)

39. (Canceled)

40. (Canceled)

41. (Canceled)

42. (Canceled)

43. (Canceled)

44. (Canceled)

45. (Previously Presented) A system for measuring fluid in a container, the system comprising:

a container for holding a fluid, the container comprising a wall having an inner surface and an exterior surface;

a first transducer coupled to the exterior surface of the container wall near the top of the container, the first transducer operable to introduce a vibration to the container wall;

a second transducer coupled to the exterior surface of the container wall near the top of the container, the second transducer operable to detect the vibration after it has propagated at least partially around the container wall and to generate a signal representative of the vibration at detection;

a wireless communication device coupled to the second transducer, the wireless communication device operable to send a wireless signal representing the generated signal; and

a second wireless communication device, the second wireless communication device operable to receive the wireless signal;

a computer coupled to the second wireless communication device, the computer operable to:

determine if a signal representative of the vibration at detection has been received;

determine a fluid mass in the container based on the time for the vibration to propagate at least partially around the wall from the first transducer to the second transducer,

determine a fluid volume based on the fluid mass,

determine a fluid level based on the fluid volume, and

control the amplitude and frequency of the vibration introduced by the first transducer.

46. (Currently Amended) ~~The system of claim 1, wherein:~~

A system for measuring fluid in a container, the system comprising:

one or more transducers operable to:

introduce a vibration to a container wall,

detect an introduced vibration that has propagated at least partially around a container wall in more than one vertical propagation direction, and

generate a signal representative of a detected vibration; and

a computer operable to determine a state of a fluid in a container based on a signal representing an introduced vibration that has propagated at least partially around a container wall in more than one vertical propagation direction,

wherein the one or more transducers are further operable to detect an introduced vibration that has propagated at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction; and

the computer is further operable to determine a state of a fluid in a container based on a signal representing an introduced vibration that has propagated at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction.

47. (Currently Amended) ~~The method of claim 14,~~

A method for measuring fluid in a container, the method comprising:

introducing a vibration to a container wall;

detecting the vibration in the container wall after the vibration has propagated at least partially around the container wall in more than one vertical propagation direction; and

determining a state of a fluid in the container based on the detection of the vibration,

wherein detecting the vibration in the container wall after the vibration has propagated at least partially around the container wall in more than one vertical propagation direction comprises detecting the vibration after it has propagated at least a majority of the way around a circumference of the container wall.

48. (Currently Amended) ~~The system of claim 20, wherein:~~

A system for measuring fluid in a container, the system comprising:

means for introducing a vibration to a container wall;

means for detecting an introduced vibration that has propagated at least partially around a container wall in more than one vertical propagation direction and for generating a signal representing a vibration at detection; and

means for determining a state of a fluid in a container based on a signal representing an introduced vibration that has propagated at least partially around the container wall,

wherein the means for detecting an introduced vibration that has propagated at least partially around a container wall in more than one vertical propagation direction and for generating a signal representing a vibration at detection is further operable to detect an introduced vibration that has propagated at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction; and

the means for determining a state of a fluid in a container based on a signal representing an introduced vibration that has propagated at least partially around a container wall is further

operable to determine a state of a fluid in a container based on a signal representing an introduced vibration that has propagated at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction.

49. (Currently Amended) ~~The method of claim 27,~~

A method for measuring fluid in a container, the method comprising:

receiving a signal representing a vibration detected after being introduced to and propagating at least partially around a container wall in more than one vertical propagation direction; and

determining a state of a fluid based on the signal,

wherein receiving a signal representing a vibration detected after being introduced to and propagating at least partially around a container wall in more than one vertical propagation direction comprises receiving a signal representing a vibration detected after being introduced to and propagating at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction.

50. (Currently Amended) ~~The system of claim 33,~~

A system for measuring fluid in a container, the system comprising:

a computer operable to:

determine whether a signal representing a vibration detected after being introduced to and propagating at least partially around a container wall in more than one vertical propagation direction has been received, and

determine a state of a fluid based on the signal,

wherein the computer is further operable to determine a state of a fluid in a container based on a signal representing a vibration detected after being introduced to and propagating at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction.

51. (Currently Amended) ~~The article of claim 39,~~ An article comprising a machine-readable medium storing instructions operable to cause one or more machines to perform operations comprising:

determining whether a signal representing a vibration detected after being introduced to and propagating at least partially around a container wall in more than one vertical propagation direction has been received; and

determining a state of a fluid based on the signal,

wherein determining a state of a fluid based on the signal comprises determining a state of a fluid in a container based on a signal representing a vibration detected after being introduced to and propagating at least a majority of the way around a circumference of a container wall in more than one vertical propagation direction.